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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,628	09/08/2005	Neville Boden	5585-70293-01	2023

24197 7590 04/26/2007  
KLARQUIST SPARKMAN, LLP  
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EXAMINER
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HA, JULIE

ART UNIT	PAPER NUMBER
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1654

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
31 DAYS	04/26/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/521,628

Applicant(s)

BODEN ET AL.

Examiner

Julie Ha

Art Unit

1654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2007.
- 2a) ☐ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) See Continuation Sheet are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Disposition of Claims: Claims pending in the application are 1-13, 17, 19-21, 23, 24, 28, 29, 36-38, 41-58, 61, 63, 69, 71-73, 76, 81 and 96.

Continuation of Disposition of Claims: Claims subject to restriction and/or election requirement are 1-13, 17, 19-21, 23, 24, 28, 29, 36-38, 41-58, 61, 63, 69, 71-73, 76, 81 and 96.

### **DETAILED ACTION**

Response to Election/Restriction filed on March 28, 2007 is acknowledged. After further reviewing the previous Election/Restriction requirement, it was determined that

Restriction is missing some of the claims and further election of species is required. The previous Restriction requirement mailed out on January 30, 2007 has been vacated.

New Election/Restriction requirement follows below. Preliminary amendment filed on July 31, 2006 cancelled claims 14-16, 18, 22, 25-27, 30-35, 39-40, 59-60, 62, 64-68, 70, 74-75, 77-80, 82-95 and 97-99. Claims 1-13, 17, 19-21, 23-24, 28-29, 36-38, 41-58, 61, 63, 69, 71-73, 76, 81 and 96 are pending in this application.

### ***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claims 2, 8, 61 and 63, drawn to a peptide material comprising ribbons or fibrils/fibres in beta-sheet tape-like structure, antiparallel conformation, of P11-1 peptide and the first method drawn to a method of tissue engineering.

Group 2, claims 2 and 13, drawn to a peptide material comprising ribbons or fibrils/fibres in beta-sheet tape-like structure, antiparallel conformation, of P11-2 peptide.

Group 3, claims 2, 13, and 37, drawn to a peptide material comprising ribbons or fibrils/fibres in beta-sheet tape-like structure, antiparallel conformation, of P11-3 peptide.

Group 4, claims 2 and 13, drawn to a peptide material comprising ribbons or fibrils/fibres in beta-sheet tape-like structure, antiparallel conformation, of P11-4 peptide.

Art Unit: 1654

Group 5, claims 2 and 13, drawn a peptide material comprising ribbons or fibrils/fibres in beta-sheet tape-like structure, antiparallel conformation, of P11-5 peptide.

Group 6, claim 2, drawn to a peptide material comprising ribbons or fibrils/fibres in beta-sheet tape-like structure, antiparallel conformation, of P11-6 peptide.

Group 7, claim 2, drawn to a peptide material comprising ribbons or fibrils/fibres in beta-sheet tape-like structure, antiparallel conformation, of P10-7 peptide.

Group 8, claims 11, 17, and 20, drawn to peptide P11-1 with an extension of bioactive peptide, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 9, claims 11, 17, and 20, drawn to peptide P11-2 with an extension of bioactive peptide, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 10, claims 11, 17, and 20, drawn to peptide P11-3 with an extension of bioactive peptide, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 11, claims 11, 17, and 20, drawn to peptide P11-4 with an extension of bioactive peptide, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 12, claims 11, 17, and 20, drawn to peptide P11-5 with an extension of bioactive peptide, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 13, claims 11, 17, and 20, drawn to peptide P11-6 with an extension of bioactive peptide, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 14, claims 11, 17, and 20, drawn to peptide P10-7 with an extension of bioactive peptide, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 15, claims 11, 17 and 21, drawn to peptide P11-1 with an extension of therapeutically active molecule, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 16, claims 11, 17 and 21, drawn to peptide P11-2 with an extension of therapeutically active molecule, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 17, claims 11, 17 and 21, drawn to peptide P11-3 with an extension of therapeutically active molecule, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Art Unit: 1654

Group 18, claims 11, 17 and 21, drawn to peptide P11-4 with an extension of therapeutically active molecule, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 19, claims 11, 17 and 21, drawn to peptide P11-5 with an extension of therapeutically active molecule, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 20, claims 11, 17 and 21, drawn to peptide P11-6 with an extension of therapeutically active molecule, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 21, claims 11, 17 and 21, drawn to peptide P10-7 with an extension of therapeutically active molecule, in ribbons or fibrils/fibres of beta-sheet tape-like antiparallel conformation.

Group 22, claims 61 and 63, drawn to a method of tissue engineering, comprising seeding the material of P11-2 peptide.

Group 23, claims 61 and 63, drawn to a method of tissue engineering, comprising seeding the material of P11-3 peptide.

Group 24, claims 61 and 63, drawn to a method of tissue engineering, comprising seeding the material of P11-4 peptide.

Group 25, claims 61 and 63, drawn to a method of tissue engineering, comprising seeding the material of P11-5 peptide.

Group 26, claims 61 and 63, drawn to a method of tissue engineering, comprising seeding the material of P11-6 peptide.

Group 27, claims 61 and 63, drawn to a method of tissue engineering, comprising seeding the material of P10-7 peptide.

Group 28, claim 69, drawn to a method of sterilizing the material comprising P11-2 peptide.

Group 29, claim 69, drawn to a method of sterilizing the material comprising P11-3 peptide.

Group 30, claim 69, drawn to a method of sterilizing the material comprising P11-4 peptide.

Art Unit: 1654

Group 31, claim 69, drawn to a method of sterilizing the material comprising P11-5 peptide.

Group 32, claim 69, drawn to a method of sterilizing the material comprising P11-6 peptide.

Group 33, claim 69, drawn to a method of sterilizing the material comprising P10-7 peptide.

2. Claims 1, 3-7, 9-10, 12, 19, 23-24, 28-29, 36, 38, 41-58, 71-73, 76, 81 and 96 link(s) inventions 1 to 33. The restriction requirement among the linked inventions is **subject to** the nonallowance of the linking claim(s), claims 1, 3-7, 9-10, 12, 19, 23-24, 28-29, 36, 38, 41-58, 71-73, 76, 81 and 96. Upon the indication of allowability of the linking claim(s), the restriction requirement as to the linked inventions **shall** be withdrawn and any claim(s) depending from or otherwise requiring all the limitations of the allowable linking claim(s) will be rejoined and fully examined for patentability in accordance with 37 CFR 1.104 **Claims that require all the limitations of an allowable linking claim** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

Applicant(s) are advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, the allowable linking claim, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is

withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

3. The inventions listed as Groups I to VI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The special technical feature recited in claim 1 is a material comprising ribbons, fibrils or fibres, wherein each of the ribbons, fibrils or fibres have an antiparallel arrangement of peptide in a beta-sheet tape-like substructure. Aggeli et al (Nature, 1997, 386: 259-262) teach responsive gels formed by the spontaneous self-assembly of peptides into polymeric beta-sheet tapes (see title). Furthermore, the reference teaches peptide sequence QQRFQWQFEQQ that forms an antiparallel beta-sheet arrangement (see Figure 4 and p. 261, Right column, 1<sup>st</sup> and 2<sup>nd</sup> paragraphs). Therefore, the technical feature recited in claim 1 is not special. Accordingly, the groups are not so linked as to form a single general concept under PCT Rule 13.1.

#### ***Election of Species***

4. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

Different forms: skin or hair care product, engineering scaffold, gel, sensor, biocatalyst, separation media, yarns, staple, floc, cord, or fabric, tissue engineering, nematic fluid.

5. Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.



Art Unit: 1654

6. For any Group elected involving form or formulation, the Applicants are requested to elect a single disclosed species to encompass a single Invention. For example, the Applicant elects Group I and elects as species a sensor as the form of the Invention. Again, by election of species, this means that Applicants should elect a single disclosed form or formulation. Election of "cells" for example, is not species, but an election to a genus. An election of this nature will not be fully responsive to the election.

7. Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

8. The claims are deemed to correspond to the species listed above in the following manner:

Claims 1-2, 5-7, 13, 19, 28, 47-56, 71-72, and 81

The following claim(s) are generic: Claim 1.

9. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: Skin and hair care products are patentably independent and distinct because of the different composition and application. For example, hair care products are applied to the hair while skin care products are applied to the skin. Additionally, skin care product would not have the same composition (such as alcohol for aerosol) as the hair care product. A cosmetic composition may require an oil base, or some sort of cream form for topical application. Further, search for one would not necessarily lead to the other. Sensor, biocatalyst or separation media is patentably independent and distinct. Biocatalysts would be an enzyme to perform chemical transformation on compounds. Separation media would require organic or non-organic solvents (such as water or media) to separate the compounds. Sensor is required to have an indicator or display for reading the "senses" of things such as the pH or other environmental changes in the body. Further, search for one would not necessarily lead to the other. Different forms that the material can be

Art Unit: 1654

comprised of is patentably independent and distinct. Filament yarn is a yarn formed by twisting two or more continuous filaments into a single continuous strand. A staple is natural fibers or cut lengths from filaments to be gathered into silver. Further, search for one would not necessarily lead to the other. Different forms (formulation) are patentably independent and distinct because these have different forms and characteristics. For example, a gel is not the same as a yarn or a cord fabric. A tissue engineered scaffolding is structurally different from hair care product or skin care product. Further, search for one would not necessarily lead to the other.

10. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

11. The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

12. **Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.**

13. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

Art Unit: 1654

remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

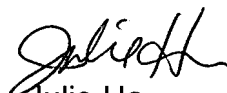
**Conclusion**

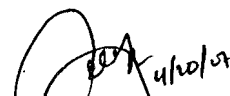
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Ha whose telephone number is 571-272-5982.

The examiner can normally be reached on Mon-Fri, 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Julie Ha  
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